UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/950,019	KONDO ET AL.
	Examiner	Art Unit
	DANIEL G MARIAM	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-28,31,33-41 and 47-50* is/are rejected.

7)☒ Claim(s) *1-12, 29-30, 32, & 42-46* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 9-10-01 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 1 is objected to because of the following informalities: in claim 1, line 36, the

limitation "at least of a part of", and should be changed to "at least a part of". Appropriate

correction is required.

Since claims 2-12 directly or indirectly depend on claim 1 they are also objected to for

the same reason set forth above for claim 1.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 49 and 50 are rejected under 35 U.S.C. 101 because the claimed inventions are

directed to non-statutory subject matter. Both claims recite the limitation "A storage medium for

storing an image processing program, ..." which is non-statutory. A program is functional

descriptive material, and is only statutory when embodied in a computer readable medium.

Applicant may overcome this rejection by rewriting the claims as "A computer computer-

readable medium for storing and image processing program, ... " (See MPEP 2106).

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claim 13 recites the limitation "each of a plurality of primary storing means . . . " in lines

12-13, the prior claim language only recites a single primary storing means for storing a pixel

value of a pixel corresponding to the object transferred by said object extracting means. There is

insufficient antecedent basis for this limitation in the claim.

        Since claims 14-21 directly or indirectly depend on claim 13 they are also rejected under

35 U.S.C. 112, second paragraph, for the same reason set forth above for claim 13.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 22-23 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohsawa

(6,470,151).

        With regard to claim 22, an image processing apparatus (See for example, Fig. 13)

comprising: object extracting means, for extracting an object, i.e., face area, from a target image,

i.e., person/s, through a plurality processing, i.e., coding of a moving image and extracting an

image part where the movement or variation saliently takes place among a plurality of images,

and outputting the result of extracting the object, selecting means for selecting at least a part of

the result of extracting the object through the plurality of processing in accordance with a user's

operation, i.e., once the result of extraction is displayed on a monitor, the user of Ohsawa's

system is allowed to designate the position of correction by selecting one of the candidates for

the position of correction (See col. 18, line 51- through col. 19, line 45); and object storing

means for storing the result of extracting the object, which is selected by said selecting means

(See for example, buffer memories 1-3, in Figs. 12 and 18; and the Abstract).

With regard to claim 23, an apparatus according to claim 22, wherein said selecting

means selects one object, i.e., one of the candidates, out of the result of extracting the object

through the plurality of processing in accordance with the user's operation (which reads on Figs.

16 and 17).

Claim 47 is rejected the same as claim 22 except claim 47 is a method claim. Thus,

argument analogous to that presented above for claim 22 is applicable to claim 47.

8.   Claims 22-27, 31, 33-41, and 47-50 are rejected under 35 U.S.C. 102(e) as being

anticipated by Matama (6,473,198).

With regard to claim 22, Matama discloses an image processing apparatus (See for

example, Fig. 2) comprising: object extracting means for extracting an object, i.e., specified

portion of an image or face of a person, from a target image through a plurality processing, i.e.,

processing conditions A-D, LUT1 AND LUT2, and/or gray balance adjustment (See for

example, Fig. 2; col. 11, lines 44-59; col. 13, lines 61-63) and outputting the result of extracting

the object (See for example, col. 14, lines 1-6); selecting means for selecting, i.e., , i.e., the user

identifies a particular portion of the extracted image by pointing to the portion using a mouse, at

least a part of the result of extracting the object through the plurality of processing in accordance

with a user's operation (See for example, col. 14, lines 7-32); and object storing means for

storing the result of extracting the object, which is selected by said selecting means (See for example, item 52a, in Fig. 2).

With regard to claim 23, an apparatus according to claim 22, wherein said selecting means selects one object out of the result of extracting the object through the plurality of processing in accordance with the user's operation (See col. 14, lines 7-52).

With regard to claim 24, an apparatus according to claim 23, wherein said selecting means selects a part of one object, i.e., unwanted portion, of the result of extracting the object through the plurality of processing in accordance with the user's operation (See for example, col. 14, lines 14-22; and Fig. 8a).

With regard to claim 25, an apparatus according to claim 22, further comprising: determining means for determining a plurality of processing methods by using said object extracting means, wherein said object extracting means extracts the object from the target image through a plurality of processing determined by said determining means (as shown in items 44 and 48, in Fig. 2).

With regard to claim 26, an apparatus according to claim 25, wherein said determining means determines a plurality of processing methods for extracting the object from the target image based on a designated position of the target image, which is designated by the user (See for example, col. 12, lines 37-65).

With regard to claim 27, an apparatus according to claim 26, wherein when the user designates a position of the target image, under the control of said determining means, said object extracting means separates pixels in the target image into a plurality of components, i.e.,

unwanted and desired regions, face region and regions other than face, generates edge images of component images, outputs areas, as the object, which are separated by edges of the edge images including a target pixel corresponding to the designated position which is designated by the user (See for example, Figs. 5, 6 and 8).

With regard to 31, an apparatus according to claim 25, further comprising: processing history storing means for storing a processing history as a processing method corresponding to the result of extracting the object, when the result of extracting the object selected by said selecting means is stored in said object storing means, wherein said determining means determines a plurality of processing methods for extracting the object from the target image based on the processing history of a before-image stored in said processing history storing means, which is processed before the target image (which reads on col. 13, lines 41-63).

With regard to 33, an apparatus according to claim 31, wherein when extracting the object from the target image based on the processing history of the before-image which is processed before the target image, said processing history storing means succeeds the processing history of the before-image to the object extracted from the target image (See for example, col. 13, line 60 – col. 14, line 6).

With regard to claim 34, an apparatus according to claim 22, further comprising: display means for displaying the objects extracted from the target image by using said object extracting means through a plurality of processing on a plurality of screens, i.e., canceling and adding of images (See for example, Figs. 8a and 8b).

With regard to claim 35, an apparatus according to claim 34, wherein said selecting means comprises a pointing device, i.e. mouse, capable of designating a predetermined position of the object in the plurality of screens displayed on said display means (See col. 14, lines 20-22 of Matama).

With regard to claim 36, an image processing apparatus comprising: determining means for determining a processing method, i.e., processing condition/s A-D, the use of LUT1 AND LUT2, and/or gray balance adjustment, for extracting an object, i.e., specified portion or face of a person, from a target image in accordance with at least of a user's operation (See for example, col. 9, lines 7-27; col. 9., line 55 – col. 10, line 2; col. 10, lines 50-66; and col. 11, lines 48-53); processing history storing means for storing a processing history (which correspond to, for example, the storing of size and position (i.e., weighting coefficients) of the specified portion for various adjustments or the specific conditions that are set as each processing is carried out based on the conditions, as a history of the processing method determined by said determining means (See item 64, in Fig. 2; col. 12, line 46 – col. 13, line 55); and object extracting means for extracting the object from a target image based on the processing method determined by said determining means, wherein said determining means determines the processing method for extracting the object from the target image based on the processing history stored in said processing history storing means (See for example, item 66, in Fig. 2; col. 13, lines 56-63).

With regard to claim 37, an apparatus according to claim 36, wherein said processing history storing means stores the processing history extracted by said object extracting means every object (See for example, item 52a, in Fig. 2).

With regard to claim 38, an apparatus according to claim 36, wherein said determining means determines the processing method for extracting the object from the target image based on the designated position in the target image designated by the user (which reads on col. 11, lines 5-24 and lines 48-53; and col. 12, line 66 – col. 13, line 17).

With regard to claim 39, an apparatus according to claim 38, wherein said processing history storing means comprises designated position storing means for storing the position in the target image, which is designated by the user (See for example, col. 12, line 46 through col. 13, line 26; and col. 14, lines 14-32).

With regard to claim 40, an apparatus according to claim 39, wherein said determining means determines a plurality of processing methods for extracting the object from the target image based on the designated position, of a before-image stored in said designated position storing means, which is processed before the target image (which reads on col. 13, lines 41-63).

With regard to claim 41, an apparatus according to claim 40, wherein when extracting the object from the target image based on the processing history of the before-image, said processing history storing means succeeds the processing history of the before-image to the object extracted from the target image (See for example, col. 13, line 60 – col. 14, line 6).

Claim 47 is rejected the same as claim 22 except claim 47 is a method claim. Thus, argument analogous to that presented above for claim 22 is applicable to claim 47.

Claim 48 is rejected the same as claim 36 except claim 48 is a method claim. Thus, argument analogous to that presented above for claim 36 is applicable to claim 48.

Claim 49 is rejected the same as claim 47. Thus, argument analogous to that presented

above for claim 47 is applicable to claim 49. Matama further discloses a storage medium for

storing an image processing program, wherein said program comprises the steps already

discussed in claim 47 (See for example, col. 6, lines 37-42).

Claim 50 is rejected the same as claim 48. Thus, argument analogous to that presented

above for claim 48 is applicable to claim 50. Matama further discloses a storage medium for

storing an image processing program, wherein said program comprises the steps already

discussed in claim 48 (See for example, col. 6, lines 37-42).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matama

(6,473,198) in view of Mukai (5,019,975).

With regard to claim 28, Matama discloses all of the claimed subject matter as already

discussed above in paragraph 8, and incorporated herein by reference. Matama does not

expressly call for wherein the user designates a rank of the results of extracting the object

through the plurality of processing, said determining means determines the plurality of

processing methods based on the rank. However, Mukai (Figure 3) teaches this feature.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the

teaching as taught by Mukai into the system of Matama, if for no other reason than to rank the

displayed image data based on importance or preference, and to do so would at least minimize

processing time.

Allowable Subject Matter

11.   Claims 29-30, 32, and 42-46 objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. The prior art of record do not teach or fairly suggest,

among other things, wherein said object extracting means separates pixels in the target image

into a plurality of components, generates edge images corresponding to component images of the

components, binarizes the edge images by using a predetermined threshold, and outputs the

binarized images, and when the user designates rank for the binarized images, under the control

of the determining means, the object extracting means binarizes the component image

corresponding to the first-ranked binarized image by using the predetermined threshold and

outputs a plurality of binarized images; history image storing means for storing, as a pixel

value, an identifier associated with the threshold and the component corresponding to at least a

part of the object selected by said selecting means; and table means for storing therein the

identifier, the component, and the threshold with a corresponding relationship thereof,

the apparatus further comprises motion detecting means for detecting corresponding coordinates

of the before-image at the designated position by motion detection at the designated position to

the target image, between the target image and the before-image, and, the object extracting

means detects the identifier of the history image storing means corresponding to the

corresponding coordinates, and also detects the threshold and the component in said table means,

corresponding to the identifier detected, generates the edge image in the component image of the

component, outputs the edge image, as the binarized image, based on a plurality of thresholds

generated from the threshold, and outputs the result of extracting the object every binarized

image; control means for, when storing in said object storing means, the pixel value of the pixel

corresponding to the object at the position of the target image designated by the user, controlling

such an operation that said designated position storing means stores the designated position, the

history image storing means stores, as the pixel value, the identifier associated with the

component and the threshold when extracting the object at the designated position, and

the table means stores the identifier, the component, and the threshold with a corresponding

relationship thereof. It is for all of the above identified reasons that claims 29-30, 32, and 42-46

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. US Patent Numbers: 6021221, 6217520, 6674902, and 6690825.

13.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-

4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DANIEL MIRIAM
PRIMARY EXAMINER

November 24, 2004